

HOUSES OF STUCCO



Wilson & Greene Lumber Co.
Syracuse, New York

THE ATLAS PORTLAND CEMENT COMPANY

1532
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ATLAS WHITE PORTLAND CEMENT
Pure white and with all the strength of gray Portland cement



Julius Gregory, Architect

H O U S E S
OF
S T U C C O

The Atlas Portland Cement Company
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Philadelphia	~	Boston	~	St. Louis	~	Des Moines
Dayton		Omaha	~	Buffalo	~	Jacksonville, Fla.



The fact that Atlas White Portland Cement was the preferred material for the surface finish of the twenty-seven major buildings of this nationally known university, indicates its leadership as a material for stucco.

Permanence for the work was a foregone conclusion, as history proves the permanence of concrete. And since Atlas White is a true Portland cement, stucco made with it is, in fact, concrete.

But in addition to permanence, these structures demanded the utmost in color, form and texture, and in all of these, Atlas White Portland Cement fully met every architectural requirement.

Possessing all these qualities which might readily make it a material high in first cost, Atlas White Portland Cement is, on the contrary, so low in first cost that its use can be afforded on any type of home, whether it be modest or pretentious.



Gilmore Court, Hartsdale, N. Y.

Mann & McNeille, Architects

Houses of Stucco

In days gone by the home owner frequently participated in the actual construction of his house. He helped to cut and haul the timbers and place them; he followed each portion of the work with care and absorbed interest. The work progressed under his watchful eye, and only the materials and methods best suited were utilized in the building of his house.

Today house construction is carried on in a different manner. An architect prepares the plans, builders bid on the work, and finally the contract for construction is awarded. Though now only a watcher of the work, the owner still is absorbed by the culmination of his years of planning and idealizing. Though not actually taking part in the work he still has just as much interest in choosing the right way to build.

In former years there was but little choice in methods of building. There was the all-wood building or the one with brick or stone walls. There were just two things to put on the roof—shingles or slate. Today there are many materials and many building methods. Some are new and untried. Others have passed the test of service and have shown themselves economical and lasting. Among the well tried and tested building methods and materials is Portland cement stucco.

Do not confuse Portland cement stucco and other types. Insist that you get Portland cement stucco.

This book has been prepared for the purpose of giving information which will assist the home owner in build-

ing better and more safely, and to secure for him the most satisfactory house not only from the standpoint of the first cost, but from the standpoint of low upkeep during the years of use.

This naturally means a house well built and of lasting materials. It might be thought that such a well built house would be so much higher in cost that it would be unobtainable, yet the reverse is more often the case. Building conditions and methods have greatly changed in the last few years and what was true of house construction a few years ago is no longer true. A well built house combining durability and beauty is now possible at a cost within the reach of all home owners.

This important change in building materials and methods has been made possible by the various uses of Portland cement. Just as the big reinforced concrete factories are replacing the old wooden ones, the concrete dams are replacing the old ones of stone masonry, and the concrete road is replacing the older and less lasting types, so Portland cement in its various uses makes possible in house construction low first cost, durability, low upkeep cost and great beauty.

The Foundation and Cellar

In every house, regardless of the type of construction, it is necessary that the foundation and cellar walls be properly constructed to prevent settlement in the building and to make the cellar a dry and usable place. A leaky cellar is a detriment to the sales value of a house and is a constant annoyance to the owner.

For dry cellars nothing is superior to poured concrete as it can be made watertight, even under the most extreme conditions of wet soil, and it also has the strength to give the house above it a lasting and unyielding foundation.

In dry and well drained soils concrete blocks are successfully used as they have sufficient strength. They should be laid on a poured concrete footing which can, in the case of soft spots in the soil, be reinforced to guard against cracking from settlement. Cellar walls of concrete block should preferably be plastered with a heavy coat of Portland cement mortar.

Where there is much water in the soil, the poured concrete foundation makes possible an absolutely dry cellar, even under the worst conditions. Before building, have a thorough examination made of soil conditions so that the proper type of construction is used.

In all foundations it is best to lay a row of drain tile around the footings, and draining to some lower point. The drain tile should be covered with loose stone so that

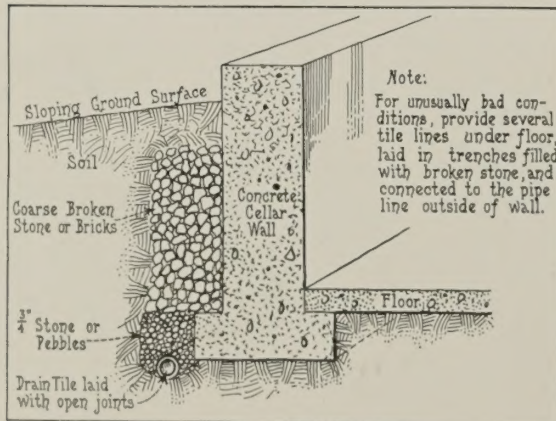


Fig. 1

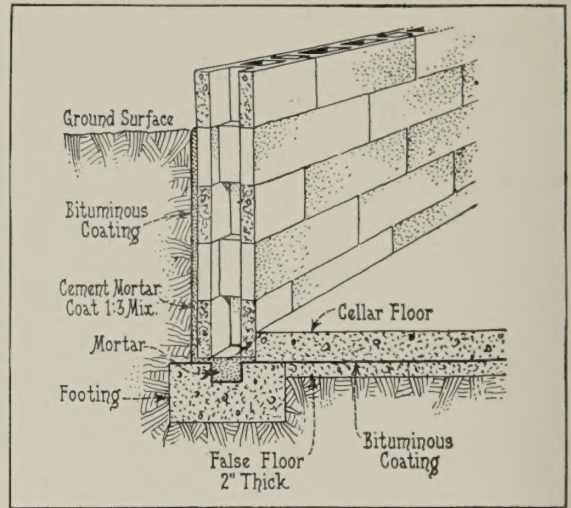


Fig. 2

the water can get to them to be carried away.

Under ordinary soil conditions just the plain poured walls and floor are sufficient. When there is much ground water it is necessary to waterproof the foundation, as the pressure exerted by this water is very great. This is done by means of layers of felt paper and hot pitch placed over the sub-floor of concrete, and on the outside of the cellar walls, as shown in Figs. 2 and 3. By this method the cellar can be made waterproof under the worst conditions.

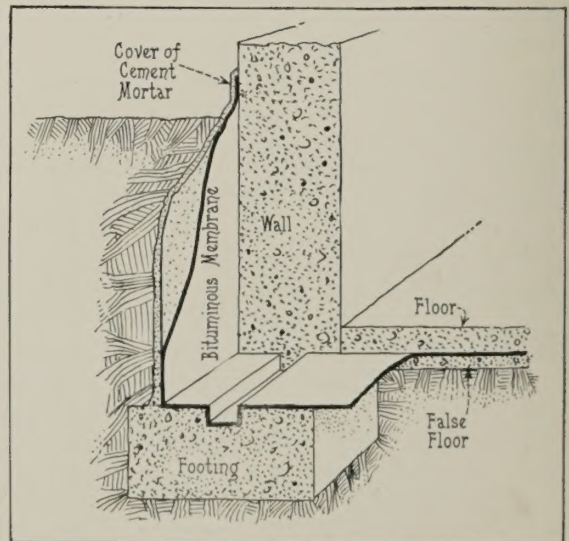


Fig. 3

The Walls—Concrete Block and Stucco

It is best to build the walls of concrete block covered with stucco. Stucco on metal lath over a wood frame naturally cannot compare with the durability and strength of stucco on concrete block. Portland cement stucco and concrete block made of Portland cement are two materials of essentially the same nature and composition. It is obvious that the combination of two similar materials will be better than the combination of stucco and wood construction.

Concrete block and stucco form a very simple construction. The blocks, 8 inches thick, are laid on the foundation wall. Door and window openings and any other special details are provided for with specially shaped blocks.

The occasional objection made that such houses are damp, does not come from the people that live in correctly built concrete block and stucco houses. There have been cases where the interior plaster has been applied directly to the inside face of the block and naturally, with insufficient insulation, such walls may be damp, as is the case when plastering is applied directly to stone, brick or hollow clay tile walls. But concrete



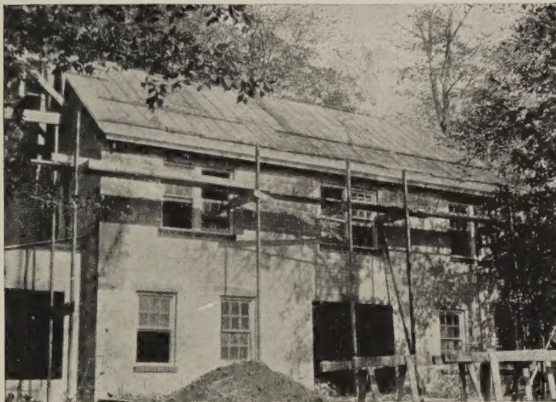
Building the walls

weight rather than to give insulation. This latter is accomplished by the air space between the walls and the plastering.

Concrete blocks form ideal material on which to apply stucco. Both the block and the stucco are of identical materials—Portland cement.

Stucco also can be successfully employed over a base of brick, stone or hollow clay tile and many houses have been built of such construction. In most localities, however, it will be found that concrete block constitutes a wall material lower in cost than any other masonry material.

If one wishes a house as fireproof as possible, it is quite feasible to make the floors and partitions of concrete, and many houses are so built. This makes a construction that is almost perfect from the standpoint of resistance to fire.



The house ready for the stucco

block and stucco houses will be found as dry as any other type when the correct construction is used and the plastering is separated from the walls by means of furring strips. As in hollow clay tile, the air spaces in concrete blocks are designed to reduce



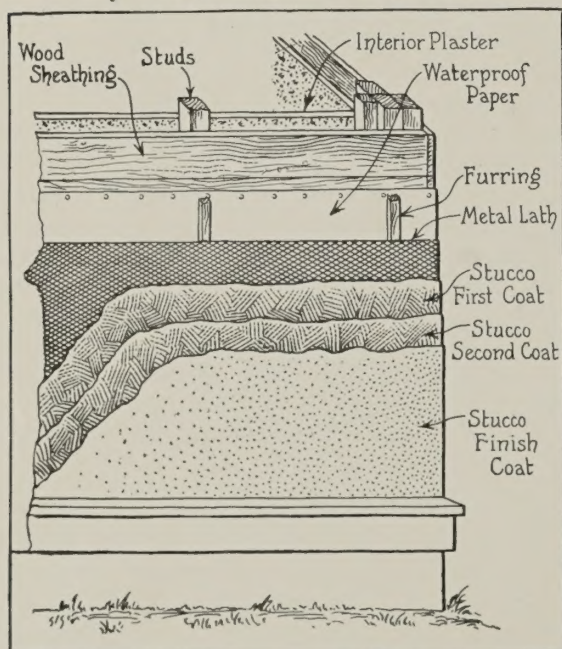
Kenneth M. Dalzell, Architect

The Walls—Stucco on Metal Lath

There are thousands of successful houses of stucco on metal lath, many of them very old, and where low cost is absolutely essential it forms a satisfactory type of construction. There are two ways of building such houses. The more common way is to cover the studs with sheathing boards and waterproof paper, and over this nail the lath which is later covered with the stucco. A better construction is to leave off the sheathing and fasten the lath directly to the studs. This is known as back-plastered construction.

Stucco on Metal Lath Over Sheathing

The method of building is much the same as before. Over the studs are placed wood sheathing boards, which should always be horizontal, and over this a layer of waterproof building paper. Then narrow strips of wood, called furring strips, are placed vertically and to these is nailed metal lath.



Showing stucco on metal lath over sheathing

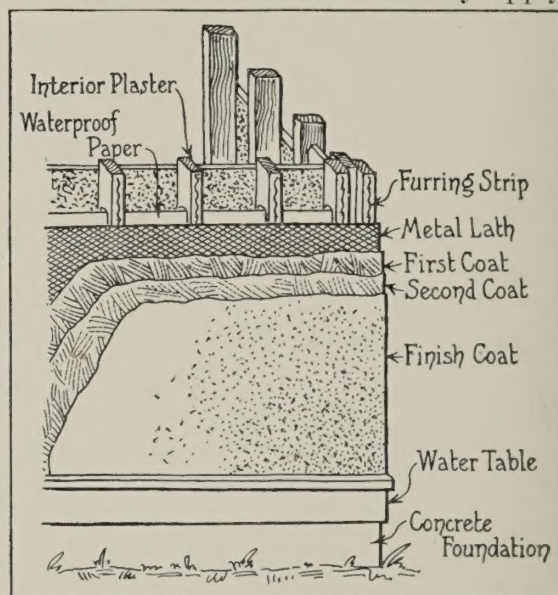
The furring strips keep the lath away from the wall so that the stucco may be pushed through the lath and so thoroughly imbed the lath in the stucco. Then the balance of the stucco is applied in two coats.

In the days of well seasoned lumber this was a good way to build. But later years

have shown that poor quality sheathing is responsible for much of the cracking that sometimes occurs in stucco. Poor sheathing warps, as it dries out, and may cause strains resulting in cracks in the stucco.

Back-Plastered Construction

In order to lessen the danger of cracking caused by the warping and pulling of sheathing boards, a more satisfactory type of construction was devised. This is known as "back-plastered" construction. By apply-



Showing back-plastered construction

ing the metal lath directly to the wood-studs, the sheathing is omitted.

At this stage the house looks like a big cage of metal lath, supported on the wood studs. Over this cage of metal lath the mason places a layer of Portland cement stucco which forces through the lath. After the stucco coat has hardened the mason goes inside the house and puts on another heavy layer over the back of the lath. Two additional coats of stucco are then applied on the outside of the wall, with the result that the wall consists of a layer of metal lath completely embedded in a layer of dense mortar which is about 1½ inches thick. The metal lath acts as reinforcing steel in the same manner as the reinforcing steel acts in large concrete structures.

Reducing the Fire Risk

Houses are exposed to two classes of fire risk—fire from an adjoining burning building and fire from within. Portland cement stucco furnishes excellent protection against fire from without.

It is equally important to build so as to prevent as far as possible the spread of fire from within. This frequently occurs because wood-stud partitions act as flues and allow the flames to pass to all parts of the house. It is a very simple and inexpensive matter to prevent this by installing "fire stops" made either of wood or baskets of metal lath filled with incombustible material. Fire stops divide the partition into isolated sections and for some time confine the fire in one portion of the house.

As many house fires originate from furnaces and from ash barrels, it is good practice to make fireproof enclosure for them by building a room of concrete block in which to house the furnace. The ceiling of this

room can be covered with metal lath plastered with Portland cement mortar, while the door of the room may be made fireproof with a cover of tin. It is also well worth while to cover the entire cellar ceiling and the walls. Surround the cellar stairs with metal lath covered with Portland cement mortar. The last step is to cover the back of the cellar door with sheet metal and in this way make the cellar a fire-resistant box, which will confine any flames originating in it.

Construction around fireplaces and chimneys also should receive special attention. If all the precautions enumerated are given proper attention, the owner will feel assured of the greatest safety against fire, because with the interior construction of the most fire-resistant type and the exterior walls of incombustible stucco construction, the fire hazard has been reduced to a minimum, while the first cost of the house has been increased only a few dollars.

The Cost of the House

Naturally, every owner wants to know how much his house will cost or, in other words, what is the best house he can build with the amount of money he has to spend. To determine this is not particularly simple, but there are some general rules which will be of help.

The more closely the shape of the house resembles that of a cube, the lower will be the cost. By this we mean, that if there are to be eight rooms all on one floor, as in a bungalow, the cost will be greater than if the house were to be of two stories with four rooms on each floor. This is because the bungalow type requires a greater area of wall and roof to enclose the same amount of room space than is required for the more compact two-story type. In addition, the amount of excavation for the cellar of the bungalow probably would be greater.

The many items of inside finish also have a great effect on cost. Cheap materials should not be used just because they are the cheapest. If they are used, it should be because they will give all the service required. When it is necessary to cut down on cost in every possible way, saving should

be made where it can be done without hurting the value. Never stint those parts subjected to severe conditions, such as the roof and exterior walls. It is here that the services of an architect are of great value. He is an expert on design and materials and can best decide where cost should be cut and where only the best is good enough. Many persons have the idea that an architect's work is merely to make the house look pretty—but his real job is to see that it is properly designed from a construction standpoint and that the quality of all materials is adequate.

It is impossible to say how much a house will actually cost from the plans and specifications. Building varies in cost almost 50 per cent in various parts of the country, but the relative cost of the various types of construction is much the same.

Many persons who have wanted a stucco house have assumed without investigation that it would cost more than shingled or clapboarded houses. Such is not the case, for stucco costs practically the same to build as wood and as it does not have to be painted is, in fact, really less costly.

The houses built of concrete block and stucco are somewhat higher in cost than the stucco houses with wood frame but, even so, this type of house is at present costing on the average only 2 or 3 per cent more than an all-frame house.

But the cost of the house should not be considered merely in terms of how much it costs to build. Remember that a house is built to live in and its real cost is the expense per year of living in that house. This yearly cost includes interest on the amount invested as represented by first cost, and includes in addition, repairs, painting and heating. It is not always the house of lowest *first* cost which is the one that costs the least to live in year after year.

The well constructed stucco house costs

little or no more to build, but saves money year after year in repairs, painting and fuel. We may consider this more in detail by examining the cost figures given in the table on this page. These figures are not imaginary but are the average of a number of houses which were actually built in various parts of the country. There will be variations in the actual costs in different parts of the country, but, in the main, the comparative cost will hold true.

In the schedule of cost it will be seen that it would cost \$250.00 more to build a \$10,000 house of concrete block and stucco than an all wood house, but that in each year there would be a saving in the living cost in favor of the concrete and stucco construction.

Type of Construction	Relative Cost	Figured for a \$10,000.00 house	Extra cost over wood
Frame-Wood Siding	100.0%	\$10,000.00	—
Stucco on Metal Lath over frame	100.7%	\$10,070.00	\$70.00
Stucco on Concrete Block	102.5%	\$10,250.00	\$250.00
Stucco on Clay Tile	103.2%	\$10,320.00	\$320.00
Brick	111.7%	\$11,170.00	\$1170.00

Comparative Living Cost Per Year of Wood and Concrete Block With Stucco

Cost Items	Wood	Concrete Block and Stucco	
Interest on investment 6%	\$600.00	\$613.00	
Painting (once in 3 years)	50.00	15.00	For the trim and doors
Repairs	25.00	5.00	The life of well applied stucco is unknown but this amount is put in for slight repairs.
Fuel	250.00	225.00	Saving due to good insulating value of concrete block and stucco construction.
Total	925.00	858.00	
Saving per year using Concrete block and stucco	858.00		
	67.00		

The sixty-seven dollar annual saving of the block and stucco house over the wood house will compensate for the extra \$250.00 initial cost in less than four years; from then on the block and stucco house will cost sixty-seven dollars less each year to live in.



Ralph Adams Cram, Architect

Bates & Howe, Architects

Color and Texture in Portland Cement Stucco

Even the most modest bungalow or cottage may have the same type of stucco which has been specified by the country's best known architects for the most costly buildings—Portland cement stucco. In such buildings as these the stucco was chosen for its durability and beauty, and cost was not considered. Yet the cost of Portland cement stucco is usually less than any other type of stucco when both types are applied as they should be.

Portland cement stucco is composed of Portland cement, sand and a small quantity of hydrated lime. It is applied in three coats when the application is made over metal lath or over a masonry wall of clay tile, brick or concrete block. For the first two coats, which are each about one-half an inch thick, the regular gray Atlas Portland Cement is used and the color of the

sand makes no difference. Each of these coats is thoroughly scratched. Over this is applied the finish coat.

The color and texture of the finish coat is most important. It should be given the same care and thought that goes with the choice of color of the interior woodwork and the choice of wallpaper.

For this finish coat, white Atlas Portland Cement is used in place of the gray Portland cement. Only in this way can true and attractive color tones be secured, since gray cement would tend to obscure the delicate shades and tints which make Portland cement stucco so attractive.

The color effects that are made possible by the use of white Atlas Portland Cement are received at a surprisingly low cost, for in the case of the ordinary eight-room house the extra expense amounts only to twenty-five or thirty-five dollars.



Walter Smedley, Architect

Coloring of the finish coat may be accomplished in two ways or with a combination of the two ways. The first method is quite simple and consists merely of mixing the white Atlas Portland Cement with a sand which will give a good color. Local sands should be experimented with, because it is often astonishingly easy to get a pleasing and attractive color in this simple way.

In some localities sand of a good color is not obtainable. The lightest colored available sand should then be used, and with this white Atlas Portland Cement and mineral coloring pigments mixed. Coloring pigments are available in all imaginable colors so that a tremendous variety of color tones are made possible. Blending of pigments and colored sand also is a means for securing new and attractive effects. If it is desired, the stucco finish coat may be covered with rock dash

and the dash will stay permanently in Portland cement stucco.

While color contributes part of the attractiveness of stucco, the texture of the stucco surface is equally important. The inequalities of a textural surface introduce lights and shadows on the wall, thus giving an individuality which relieves monotony and allows the owner to express his own ideas and personality. The illustrations in this book show many variations in textural finishes, but there are, in addition, almost limitless varieties which may be devised.

For further information send for our book "Stucco," which contains complete specifications as well as much information on the securing of textural finishes. It is illustrated by photographs that the mason can follow.



Colors in stucco made possible by using Atlas White Portland Cement.



Colors in stucco made possible by using Atlas White Portland Cement.

There is a relationship between the architecture of a house and the texture to be used. The scale or roughness of the finish should be in keeping with the type of ornamental work on the house.

If, for instance, the molding and other trim is delicate and of a fine character, then the stucco should have a fine and almost smooth surface such as a stipple or fine spatter dash surface. If, however, there is little ornamentation on the house, then a bolder and rougher stucco should be used.

The scale of the texture also depends upon the distance from which the house is usually seen. If the house is near the sidewalk or road, it is best to use a small scale texture, while if the house is normally seen from a distance the texture should be so rough that it can be seen.

The best way to determine just what should be used is to put on samples and examine them from different points of view, and then reproduce the one that gives the best effect.



Bloodgood Tuttle, *Architect*

A fairly smooth finish, showing the sweep of the trowel.



Julius Gregory, *Architect*

A broad rough finish for a large house, back from the road.



Rossiter & Muller, *Architects*

A stucco texture of a hand worked nature



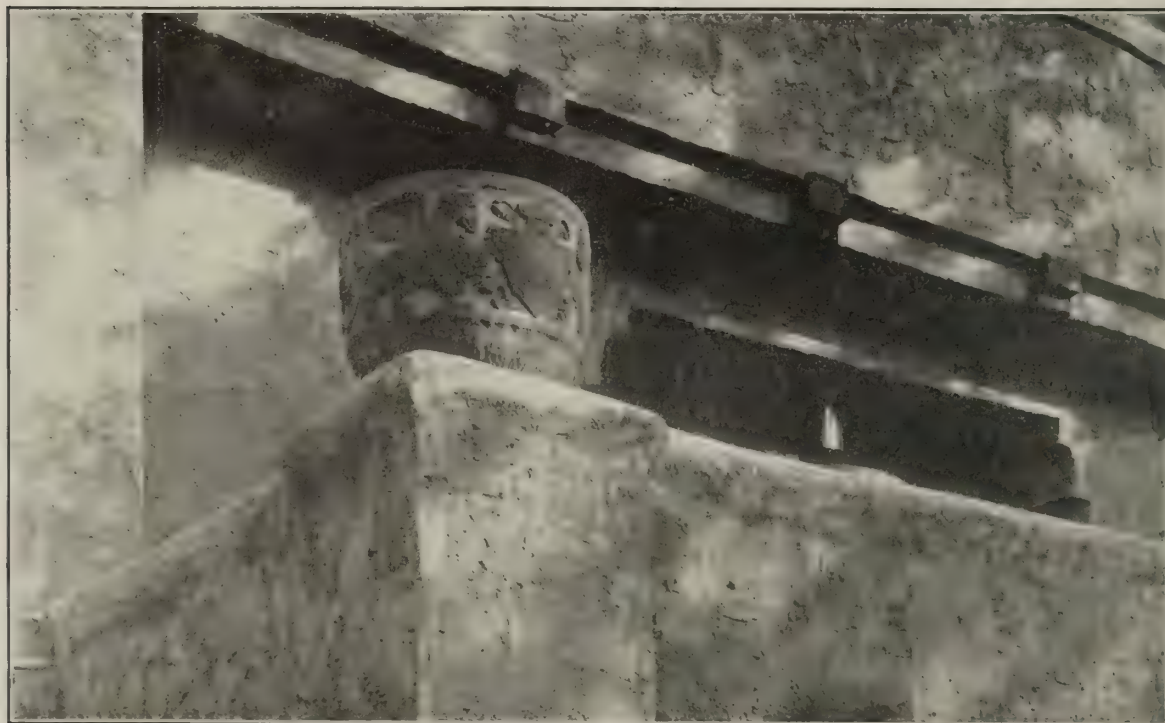
George E. Jennings, *Architect*

A light torn finish, giving a pleasing effect on wall areas.



Paterson-King Corp., *Architects*

A mottled effect in two or more colors.



C. J. Schwieterman, *Architect*

A rough finish to harmonize with Spanish or Mexican architecture.



G. J. Fernschild, *Architect*

Another rough torn finish for a house with little ornamental detail.

The Roof Covering

For the roof covering there are many materials from which to choose—varying from wood shingles to concrete tile. In the long run it always pays to cover the roof with the material which is lasting. Leaks and consequent damage to interior decorations are avoided, as well as the danger from

fire which always menaces the combustible wood-shingled roof.

The use of cement gives an effective and lasting roof covering at comparatively low cost. Concrete tile are made in various forms and colors—either as flat tile or rolled tile of Mexican or Spanish design.



Spanish Type of Cement Tile



A house of concrete block, Portland cement stucco and cement roofing tile.



Applying the roofing tile over waterproof building paper.



ALASKA



CALIFORNIA



MASSACHUSETTS



FLORIDA

The adaptability of Portland cement stucco to all climates.



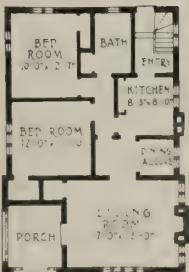
PAOLI, PA.

Walter Smedley, Architect

The Charm of Stucco



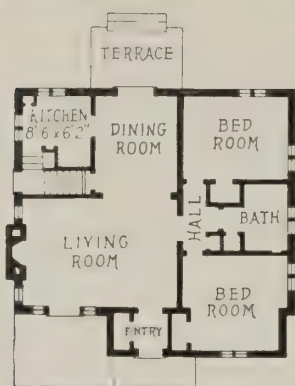
Milton Dana Morrill, *Architect*



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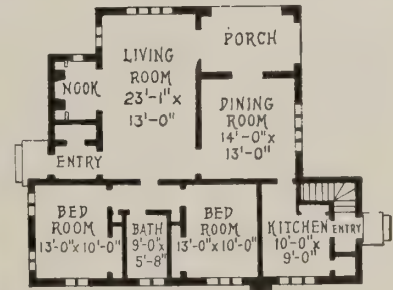
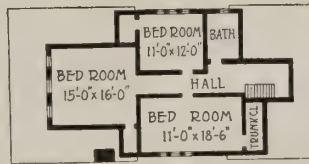
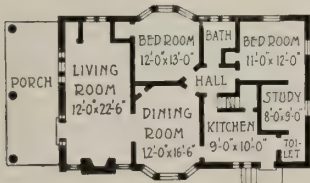


Exterior and interior views of an attractive five room bungalow, finished in stucco of White Portland cement.

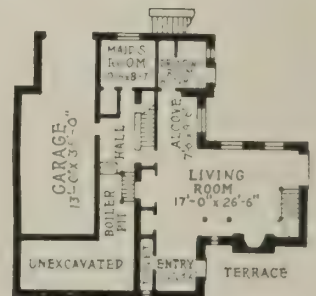
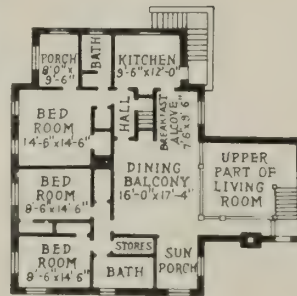




Samuel T. Atherholt, Architect



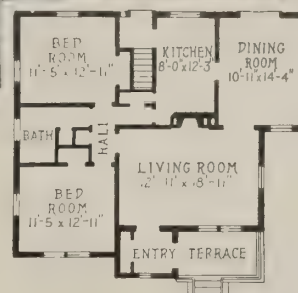
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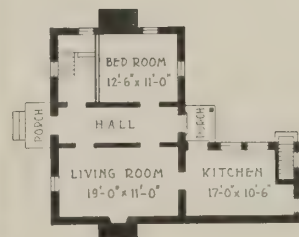
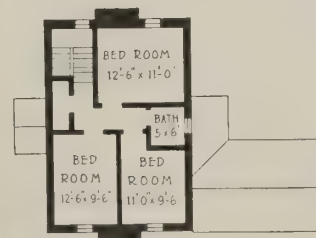
Fuller & North, Architects

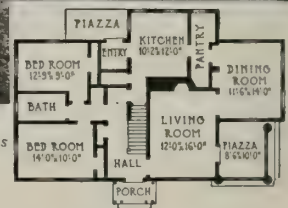


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Frederick J. Sterner, Architect





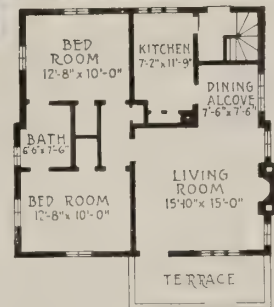
Pearce, Quiner, Nevin and Chickering, Architects



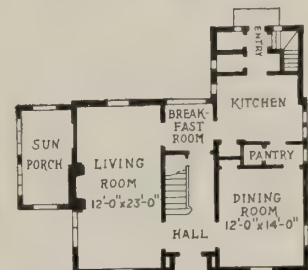
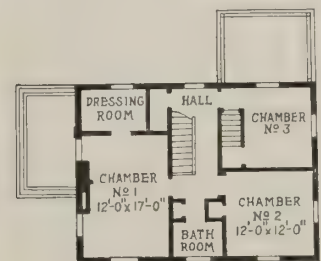
Frank A. Hays, Architect



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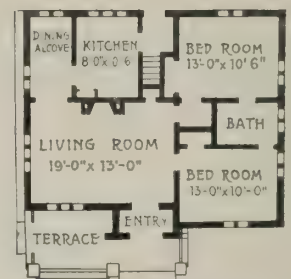


Keally & Thompson, Architects

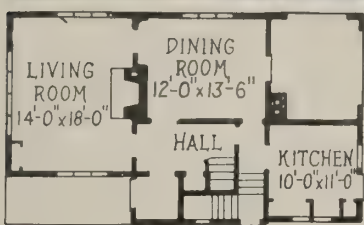




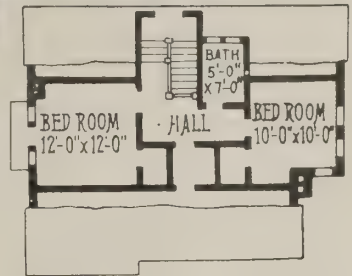
Albro & Lindeburg, Architects



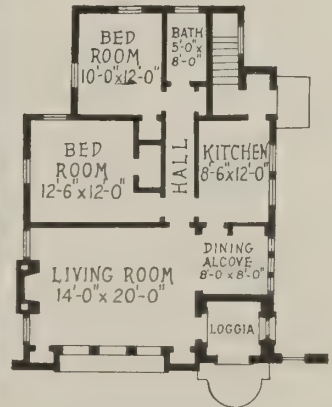
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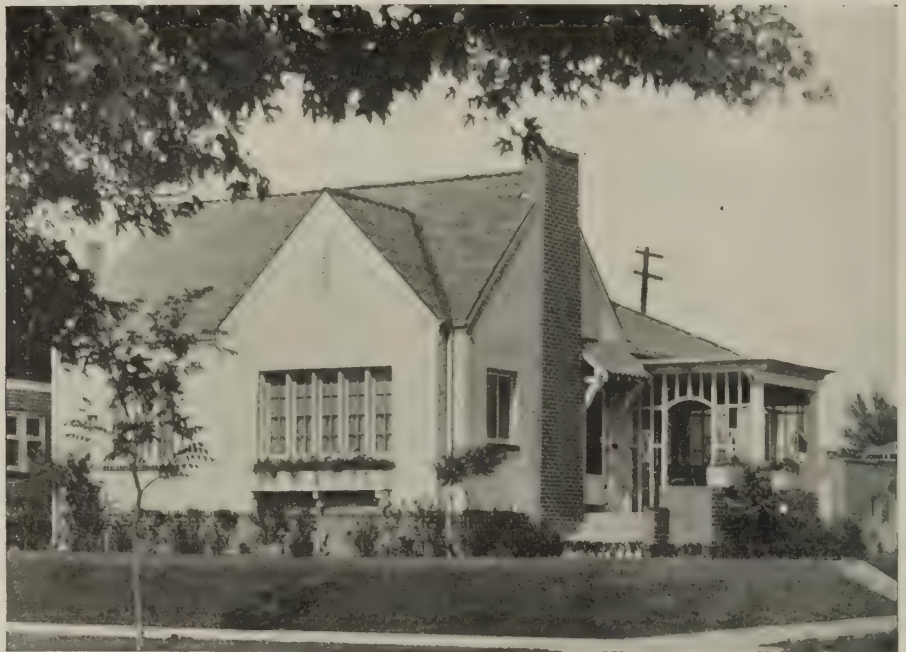
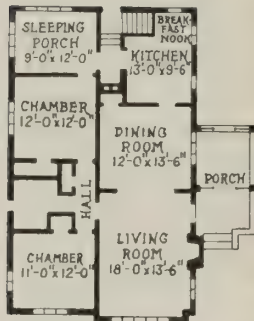


John Floyd Yewell, Architect

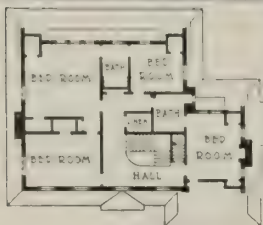


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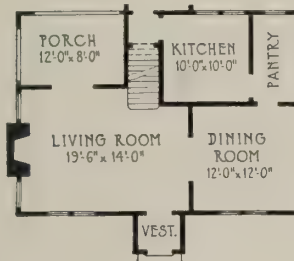
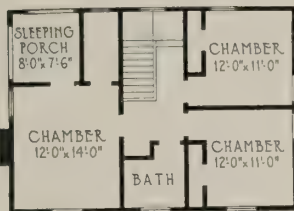




Architect's Small House Service Bureau, 6-B-20



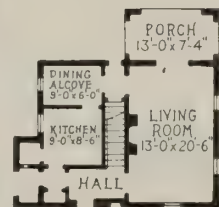
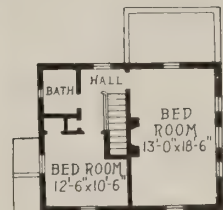
Morris & Erskine, Architects



William Aitken, Architect

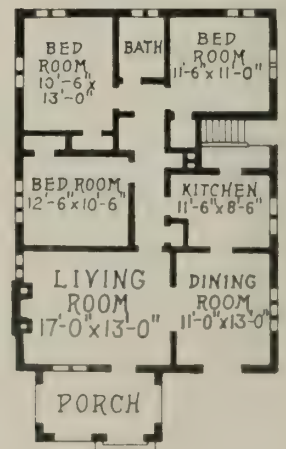


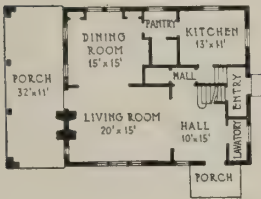
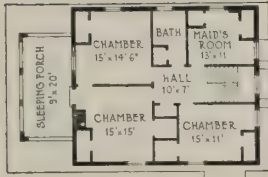
Louis Justement, Architect



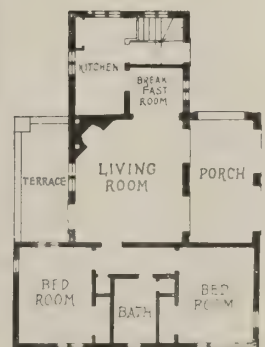


Architect's Small House Service Bureau, 6-B-7





C. E. Schermerhorn, Architect



Architect's Small House Service Bureau, 4-B-6



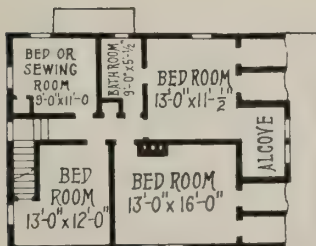
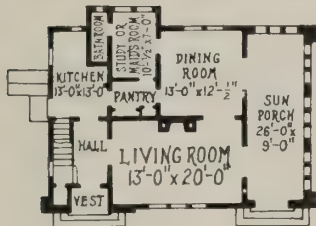
Glenn Phelps, Architect



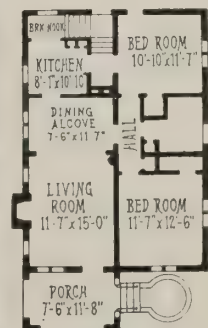
Architect's Small House Service Bureau, 3-B-10

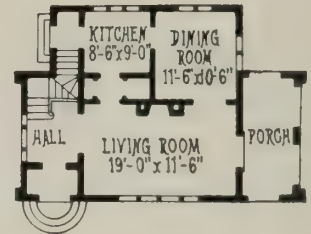
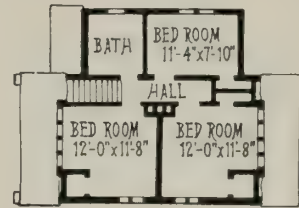


Palmer Rogers, Architect



Architect's Small House Service Bureau, 4-B-16

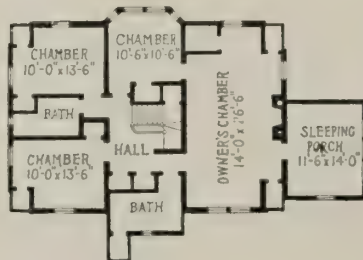


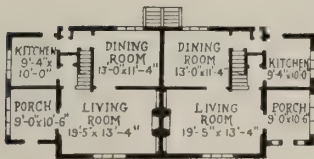
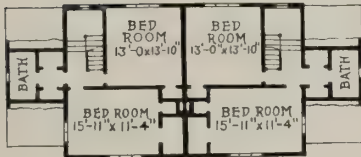
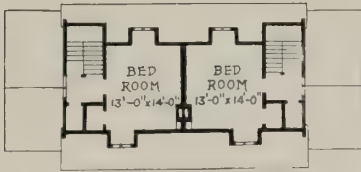


Architect's Small House
Service Bureau, 6-B-4

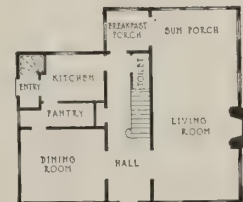
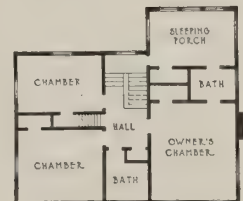


A. Raymond Ellis, Architect

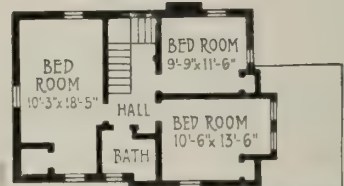
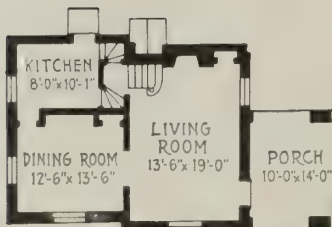
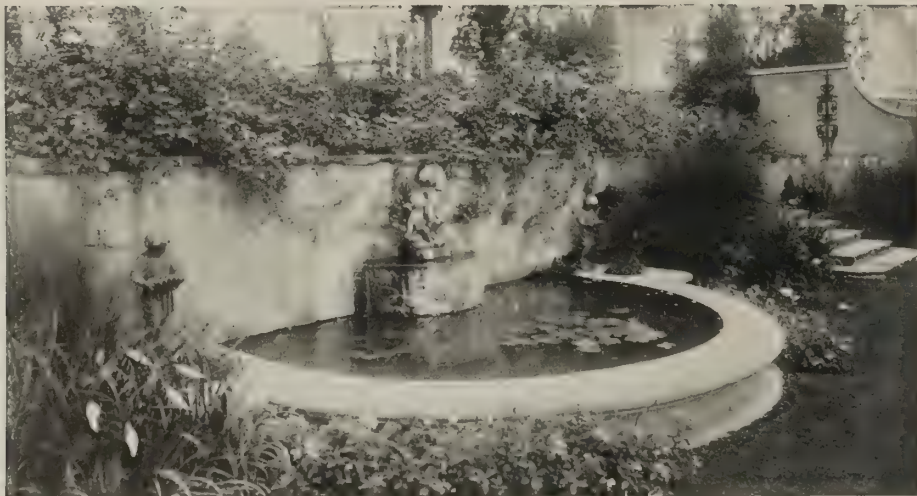




Robert E. Sherlock, Architect



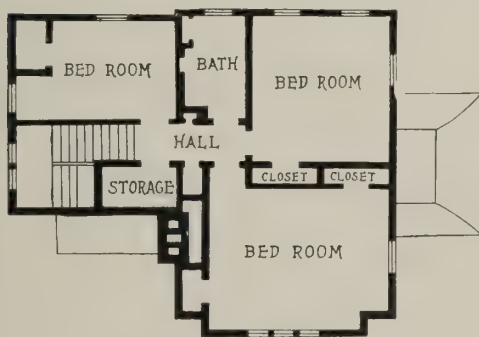
Architect's Small House Service Bureau, 6-A-47



Clarence Taber, Jr., Architect



Architect's Small House Service Bureau, 6-A-64



One good-looking home of guaranteed permanence attracts others of the same type and so increases its own value. This attraction is made stronger when the construction is of a type that increases the fire-safeness of any locality. The better residence sections of most communities recognize this in their restrictions.

The Garage

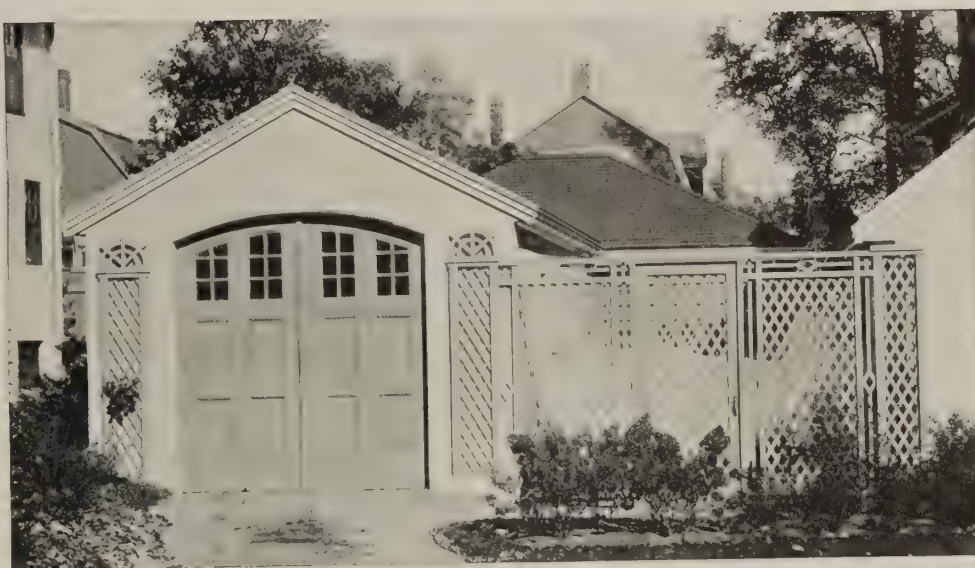
The design of the garage usually reproduces the essential characteristics of the architecture of the house, but at times it may be desirable to vary the design slightly. The designs on the next three pages will furnish suggestions.

In building the garage it should be borne in mind that the automobile furnishes a fire risk, and the garage should be built of materials that will prevent the fire from spreading. For this purpose it is best to use concrete block and stucco.

The roof will probably rest on wooden rafters, and it is wise to prevent it from burning by fastening metal lath under the cross rafters and covering the underside with Portland cement plaster. This makes the garage almost a fireproof box so that fire

starting there will have difficulty in spreading.









Remodeling in Stucco

Stucco is not limited to use on new houses. It is often the salvation of the old house which has become dilapidated on the exterior, while the interior is still in good shape. In many cases these old houses were well built and are structurally sound, but the exterior has deteriorated or is of a style of architecture which is no longer wanted.

Stucco makes possible the rejuvenation of such old houses at an expense that is usually surprisingly small. In the case of the house which is just overcoated, and

in which no structural changes are made, the cost often does not exceed the expense of two paintings. It is also surprising what elaborate changes can be made at low cost. Buildings which are out of date can often be easily remodeled into modern useful houses. On the following pages are examples of what has been done in remodeling old houses with stucco. At first glance it seems impossible to believe that the old structure has not been entirely rebuilt. Yet if the pictures of the old house and the new one are carefully compared, it will be seen that the structural changes are in reality quite minor and unimportant.

It is a comparatively simple matter to remove or change old porches and to block up old doors and windows or cut new ones during remodeling. Many houses that may seem hopeless can be made into most attractive and valuable structures through remodeling with stucco made with Atlas White Portland Cement.



Before Remodeling.



Lucian E. Smith, Architect

After Remodeling. Residence at Montclair, N. J.



Here is an unusual transformation in stucco at Decorah, Ia. The little church had probably become inadequate for its growing congregation, but with the help of stucco made with Atlas White Portland Cement under the plans of Hanson & Altfillisch, the architects, made a beautiful home.

Aside from the personal satisfaction of dwelling in a home that retains continually its fresh, attractive appearance, the wise man looks ahead to the day when for one reason or another he may wish to place it on the market. Its appearance in the meantime will have had its effect on the type of neighbor it attracts. If pleasing, it will have created around itself a pleasing neighborhood, so preventing a decrease in value and instead adding another factor toward ready salability.



Hanson & Altfillisch, Architects



This remodeling job was done under the plans of Larson & Wells, architects, Hanover, N. H., and the remodeled building is now occupied by the Sigma Phi Epsilon Fraternity at Dartmouth College.



This home at West Medford, Mass., was rejuvenated with cream colored stucco made with Atlas White Portland Cement. Notice the amazing transformation.

Stucco made with Atlas White Portland Cement is as permanent as concrete, having the same quality of permanence that made the old Roman roads of concrete last over two thousand years. And such stucco, because of its beauty, its permanence, and its economy is an ideal medium for remaking the old home, whether of frame, brick or stone construction.

From the standpoint of appearance there is probably no other material with so wide a range of possible effects. There is practically no limit to the variety of textural finishes that may be secured, and innumerable shades of color can be had through the use of pigments or selected aggregates.



The permanence and strength of concrete has been demonstrated by its use on great construction work. And now its compliance to any demand of form and shape is demonstrated by such achievements as the Fountain of Time, in Washington Park, Chicago.

Lorado Taft, sculptor of the Fountain, said: "There is not a stone that America produces—not a material—that I would prefer to the color and effect we have on the monument."

The quality that made Atlas (in gray and white) the preferred Portland cement for the Fountain of Time makes it equally desirable for all types of concrete construction. When you specify Atlas White Portland Cement you can be sure of getting a product that has all the strength of gray Atlas, and is, in addition, pure white in color.

The Atlas Portland Cement Company

25 BROADWAY, NEW YORK, N. Y.

CHICAGO	BIRMINGHAM	KANSAS CITY
PHILADELPHIA	BOSTON	ST. LOUIS
		DES MOINES
OMAHA	BUFFALO	JACKSONVILLE, FLA.
		DAYTON

ATLAS WHITE PORTLAND CEMENT

"Pure WHITE and with all the strength of gray Portland cement."

We are manufacturers of Portland cement of two colors, gray and white. Both of these conform in every way with the Standard Specifications for Portland Cement of the American Society for Testing Materials and adopted by the U. S. Government, the American Institute of Architects, American Society of Civil Engineers and similar bodies.

Because of the pure white color of white Atlas Portland Cement it is used wherever the gray Atlas Portland cement does not give the desired color effect.

Atlas White Portland Cement can be used for any work for which gray Portland cement is suitable, because it gives equal strength, equal wear and equal durability.

The use of white Atlas Portland Cement results in a mortar which will not stain fine textured stone such as Indiana Limestone, marble and similar stones which might be stained by mortar made with gray Portland cement.

Among the established uses of Atlas White Portland Cement are:—

For its color

Stucco—Makes possible a great variety of shades and tints because of neutrality of color. It is colored by mixing directly with a sand of the proper color or by pigments.

Brick, Terra Cotta or Tile Joints—Gives either a pure white mortar to contrast with the color of the material or a tinted joint to blend with the tonal value of the brick or terra cotta. It is colored by mixing directly with a sand of the proper color or by pigments.

Cast Stone, Trim and Garden Furniture—Gives white or colored effects where gray cement color would be dead and uninteresting.

Terrazzo—Makes possible an entirely new and attractive range of color effects. Will not soil and

has the same wearing qualities as gray Portland Cement.

Swimming Pools—Used either with white sand or sometimes tinted as a plaster for lining swimming pools. Also used to pour the exterior walls to give a white effect directly.

Interior Plastering—For interior plastering it gives all the range of colors and with textured walls, the strength necessary to give good wearing quality.

It is unaffected by moisture and therefore also used for dairies, cold storage rooms and laboratories.

For its non-staining qualities

Pointing, Setting and Backing Limestone. Widely used for setting Indiana Limestone, marble and similar stone. Gives the strongest possible non-staining mortar.

Strength, Physical and Chemical Properties of Atlas White Portland Cement in comparison with the Standard Specifications for Portland Cement (which include White).		
1 Part Cement and 3 Parts Sand, Tensile Strength per Square Inch.	Standard Specifications	Atlas White Portland Cement.
At 7 days.....	200 Lbs.	331 Lbs.
Ditto at 28 days.....	300 Lbs.	467 Lbs.
Loss on Ignition.....	Not to exceed 4.00%	2.13%
Sulphuric Anhydride.....	" " " 2.00%	1.83%
Magnesia.....	" " " 5.00%	1.19%
Fineness—Residue on No. 200 sieve.....	" " " 22.00%	6.9%
Initial set.....	Not less than 45 to 60 minutes	2 hr. 30 min.
Final set.....	Within 10 hours	5 hr. 00 min.

THE ATLAS PORTLAND CEMENT COMPANY

25 BROADWAY, NEW YORK

CHICAGO

BIRMINGHAM

KANSAS CITY

Philadelphia
Omaha

Boston
Buffalo

St. Louis
Dayton

Des Moines
Jacksonville, Fla.

Further information on concrete and stucco will be gladly furnished you by The Atlas Technical Department, which consists of a staff of trained Engineers and is maintained for the purpose of cooperating with users of cement. You are under no obligation for this service.

The Company furnishes this book and the information and assistance referred to above, without guaranty, warrant or other obligation on its part.

**THE ATLAS PORTLAND CEMENT
COMPANY**

